

## **Clean Up of Contaminated Sites**

### **33.475.480 Removal or Remediation of Hazardous Substances**

The following regulations apply to actions taken to remove or remediate hazardous substances that are conducted under ORS 465.200 through 465.545 and 465.900 and are exempt under ORS 465.315. The regulations of this section are not implemented in the same way that other regulations in this Title are implemented. ORS 465.315 waives the requirement that entities performing removal or remediation actions obtain permits or other authorizations from a local government. ORS 465.315 also waives local procedural requirements for obtaining a permit or other authorization. ORS 465.315 does not waive or exempt the removal or remediation activity from complying with a local government's substantive requirements. Rather than being administered through a land use process, the following regulations are implemented as part of the removal or remediation process administered by the Department of Environmental Quality. These regulations can also be used as voluntary guidance for the removal or remediation of hazardous substances administered by the United States Environmental Protection Agency.

The Bureau of Development Services works with the entity performing the removal or remedial action to ensure that the regulations of this section are met to the extent feasible. The BDS determination is delivered to the applicant and DEQ in the form of a letter. Because the regulations are not subject to traditional City land use processes, the regulations are not entirely clear and objective standards, nor are they discretionary approval criteria applied in the context of Oregon land use statutes. The regulations are more specific and descriptive than approval criteria. Implementing them will require professional judgment. For purposes of this section, the regulations apply only to the portion of the site located within the boundaries of the removal or remediation action, as delineated by the Department of Environmental Quality. When development is occurring in conjunction with actions taken to remove or remediate hazardous substances, but which is not in itself a remediation or removal action, then that development must meet all other applicable standards, approval criteria and procedural requirements of this chapter.

- A. When there is significant alteration of the area riverward of the top of bank the following apply. A significant alteration is an alteration that affects a substantial portion of the bank including relatively large amounts of excavations and fill, alterations that require changing the ground contours, removal of buildings, significant engineering and in-water work. Minor bank alterations such as installation of monitoring wells, sampling cores, installation of extraction systems, sheet pile walls that are entirely below grade, repair and maintenance of storm water systems, removal of debris, temporary road access to the shoreline, relatively small amounts of grading and fill, and installation of temporary erosion control measures do not constitute significant alteration:

1. In the area that is between the top of bank and the Ordinary High Water Mark:
  - a. The preferred bank design uses biotechnical techniques including soil bioengineering. Figures 475-5 and 475-6 show examples of biotechnical techniques. In this case, rock armoring or other hard surface armoring methods should not be used in substantial amounts on the surface between the top of bank and the Ordinary High Water Mark. This is not intended to preclude using rock or other hard surface stabilization methods below the surface if necessary to contain hazardous substances or to preclude the use of rocks or gravel as part of the biotechnical technique. On the surface, the bank should be sloped or terraced in a way that allows the establishment and maintenance of vegetation as the primary soil stabilization method. Incorporation of large wood, including root wads, tree boles and logs, is encouraged to reduce localized erosion and improve bank stabilization. This type of bank treatment also improves ecological values. The bank should be planted to achieve 100 percent coverage within five years. All plants must be selected from the *Portland Plant List* and should be appropriate for the conditions on the site. The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met; and
  - b. If the bank is not designed in a manner consistent with subparagraph A.1.a, then the following apply:
    - (1) The applicant must demonstrate that all reasonable efforts were made to design the bank in a manner consistent with subparagraph A.1.a;
    - (2) The applicant must make a payment to the River Restoration Fund. The Bureau of Development Services collects payments to the River Restoration Fund. The amount of payment is based on the Fee Calculator for Off-Site Mitigation. The fees are adjusted annually by the Director of BES. Payment to the River Restoration Fund is not required if the existing bank is ranked low in the *Willamette River Natural Resources Inventory: Riparian Corridors and Wildlife Habitat (2008)*; and

(3) If rock armoring is used on the surface between the top of bank and the Ordinary High Water Mark, then every effort should be made to limit the amount of rock used by re-grading the slope to allow a combination of rock and vegetation. At a minimum, live native willow or dogwood stakes should be planted in the interstices between the rocks at a ratio of three stakes for every square yard of rock armoring.

**Figure 475-5  
Soil Bioengineering**

**Figure 475-6  
Marsh Bench**

2. In the area that is riverward of the Ordinary High Water Mark, the substrate should be natural whenever possible. If DEQ determines that a hard treatment is necessary, every effort should be made to incorporate as many of the following as possible or demonstrate why incorporation is not possible:

- a. Shallow beaches in the near shore area;
- b. Avoid a submerged slope that would require engineered treatments to remain stable such as a slope steeper than 1:7 (rise to run ratio);
- c. Integrate large wood, or other natural wave deflection structures or techniques that mimic the function of large wood, into the near-shore environment. Rock armoring and industrial debris is discouraged;
- d. Avoid in-water structures that will impact the navigation channel; and
- e. Consider water access to abutting upland industrial sites and avoid inwater structures that will preclude river-dependent or river-related development from accessing and utilizing the river for transport, transfer and conveyance of goods and materials to and from the upland site.

B. The following regulations apply to minor alterations that occur between the top of bank and the Ordinary High Water Mark, and to areas within the River Environmental overlay zone landward of the top of bank:

- 1. Disturbance of the ground and removal of native vegetation should be avoided to the extent practical. If avoiding disturbance or native vegetation removal is not practical, disturbance and removal should be minimized as much as possible. The applicant is required to demonstrate the extent to which avoidance is or is not practical and the extent of minimization.

2. If ground disturbance or removal of native vegetation can not be avoided, then the area where the ground has been disturbed or where native vegetation has been removed must be replanted as follows:
  - a. Nuisance and prohibited plants identified on the *Portland Plant List* must be removed within the area to be replanted and within 10 feet of any plantings;
  - b. Required plants and planting densities:
    - (1) One tree, three shrubs, and four other plants are required to be planted for every 100 square feet of replanting area. Trees may be clustered. Plants must be selected from the *Portland Plant List* and must be compatible with the conditions of the site; or
    - (2) One tree and three shrubs are required for every 100 square feet of replanting area, and the planting area must be seeded with a native grass and forb seed mix at a ratio of 30 pounds per acre. Trees may be clustered. Plants and seed must be selected from the *Portland Plant List* and must be compatible with the conditions of the site;
  - c. Plant diversity. If more than 10 trees, shrubs or groundcover plants are used to meet the above standard, then no more than 50 percent of the trees, shrubs or groundcover plants may be of the same genus. If more than 40 trees, shrubs or groundcover plants are used, then no more than 25 percent of the plants may be of the same genus;
  - d. Plant size. Trees must be a minimum 1/2-inch caliper or bareroot unless they are oak or madrone, which may be one gallon size. No more than ten percent of the trees may be oak or madrone. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots;
  - e. The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met; and
  - f. If replanting on-site is not allowed by DEQ, then the applicant is required to make a payment to the River Restoration Fund or provide an equivalent area of planting at an off-site location. The Bureau of Development Services collects payments to the River Restoration Fund. The amount of payment is based on the Fee Calculator for Off-Site Mitigation. The fees are adjusted annually by the Director of BES. Payment to the River Restoration Fund is not required if the bank is ranked low in the *Willamette River Natural Resources Inventory: Riparian Corridors and Wildlife Habitat* (2008). The off-site mitigation area must be owned by the

applicant or the applicant must have an easement or deed restriction sufficient to ensure the success of the mitigation.

3. Trees that over 4 inches in diameter that are removed must be replaced at a ratio of one diameter inch of replacement tree for every one diameter inch of tree removed. The replacement trees must be a minimum 1/2-inch diameter. The replacement trees must be native trees selected from the *Portland Plant List*. The replacement trees must have a canopy factor equal to or greater than the canopy factor of the tree species removed, as prescribed in the *Tree and Landscaping Manual*. All replacement trees must be planted within the River Environmental overlay zone, within 50 feet of the River Environmental overlay zone, or within 50 feet of the top of bank of the Willamette River in the North Reach. If the trees are not planted on the applicant's site, then the applicant must own the property or have an easement or deed restriction sufficient to ensure the success of the tree planting. Replacement trees can be counted toward meeting the tree requirement of paragraph B.2 above.
  4. All vehicle areas installed for purposes of conducting the removal and remediation actions must be removed from the River Environmental overlay zone by the time the project is complete and the area must be restored to its original condition.
- C. The removal or remediation actions and the final remedy must not preclude the use of the site consistent with the uses allowed by the base zone or approved conditional use. If the site is within the River Industrial overlay zone, the final remedy should allow the use of the site for river-dependent or river-related industrial activities. Generally, this means that the remedy should not preclude dredging necessary to establish or maintain navigation to and from riverfront sites, the placement of piles or dolphins, or the development of a marine industrial facility, dock, or wharf or other river-dependent or river-related structure.
- D. Monitoring wells located above the Ordinary High Water Mark must be flush mounted. Flush mounting is not required if it would pose a danger to boats in the water.
- E. Buildings, structures and equipment installed for the purpose of removing or remediating hazardous substances should not be located within or riverward of the river setback to the extent practical. The river setback is described in Sections 33.475.2 10 and .310. Location of buildings, structures or equipment should take into account the fact that the setback serves the purpose of keeping structures away from the river, and reserves space for development of the greenway trail in cases where the greenway trail is designated for the site. All efforts should be made to keep the area within and riverward of the river setback free of buildings, structures and equipment. If buildings, structures or equipment are proposed for the area within or riverward of the setback, then the applicant must demonstrate why these items must be located within the area.